

ABSTRACT

A system for monitoring, controlling, and locating portable computerized devices performing remote diagnostic analysis of control networks. The portable, wireless equipment includes computerized display device connected to a wireless intermediary device for allowing a wireless connection to be made to a control network. The computerized diagnostic device may be embodied as a personal digital assistant (PDA) having a graphical screen display, on which may be displayed the network nodes and connections of the control network presented against a backdrop of a transit vehicle or other facility shown in three-dimensional, rotatable images. The wireless equipment may allow the operator to force individual system components to output states, and provide for real time monitoring. The portable, wireless equipment is programmed with information pertaining to the connections and locations of the components in the control network, thereby simplifying diagnosis or testing by the operator. The portable, wireless equipment may be operated within a network of wireless communication cells, whereby transmitted messages between the portable, wireless equipment and the control networks may be monitored and the position of each device determined. Graphical images of the control networks may be displayed or rotated based upon the operator's relative position and orientation within respect to the control network.